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Manufacturing in Oregon

The following is a transcript of a roundtable discussion sponsored by the University of Oregon Radio Forum Committee. The discussion was tape-recorded and released to a number of Oregon radio stations.

Participants were: BERNARD GOLDHAMMER, *head of Customer Services and Power Requirements, Bonneville Power Administration*; ROBERT E. MCCOY, *executive secretary, Oregon Development Commission*; JAMES E. MAXWELL, *business analyst, U.S. Department of Commerce Field Office, Portland, Oregon*; WILLIAM J. ROBERT, *associate professor of business administration, University of Oregon*; WESLEY C. BALLAINE, *professor of business administration, University of Oregon, who acted as moderator.*

BALLAINE: Americans commonly associate industrialization with progress. The growth of manufacturing enables us to enjoy a standard of living today that is substantially higher than it was even a decade ago. The probabilities are that the increased output of industry ten years in the future will result in an even greater rise in our standard of living. At the local level, we are often interested in the location of additional manufacturing firms to provide larger payrolls, to attract more people, to offer a broader tax base, and to provide a better use of our available resources. A considerable amount of our information about industry comes from the United States Department of Commerce, especially through the Bureau of the Census. Mr. Maxwell, what is the relative importance of manufacturing in the state of Oregon?

MAXWELL: We usually consider the importance of manufacturing on the basis of employment. Manufacturing employment in the state of Oregon is now about 135,000. This compares to a total employment in all nonagricultural pursuits of about 450,000; of course, if agriculture is included, about 85,000 more must be added.

GOLDHAMMER: Is that 135,000 relatively steady or is there much seasonal fluctuation?

MAXWELL: In the state of Oregon, particularly in our forestry industry, the seasonal factor is very important.

BALLAINE: How does Oregon compare with other states in the relative importance of manufacturing?

MAXWELL: On the whole, in relationship to our total labor force, Oregon manufacturing is as important as in most other states, and perhaps just a little more so.

MCCOY: In fact, one of the studies we made indicates that manufacturing employment in Oregon is increasing at a faster rate than that of the United States as a whole, although, perhaps, in comparison to some of the more highly industrialized states, our proportion in manufacturing employment is not high.

GOLDHAMMER: Why is it increasing at a higher rate than the rest of the nation?

MCCOY: Possibly because our economy is going through a transition from an economy based upon agriculture, mining, fishing, etc. into the manufacturing field. If we talk in terms of percentages, our original manufacturing employment, or the base for these figures, was somewhat smaller than in most other states.

GOLDHAMMER: Has the fact that there has been a movement in the lumber industry from western Washington to southwestern Oregon had any effect in increasing the manufacturing employment?

MCCOY: Undoubtedly this has been a factor. I do not know the exact figures in regard to this particular aspect of manufacturing in Oregon. Of course, the study dealing with manufacturing employment I mentioned includes logging and lumbering as well as the other aspects of the forest-products industries.

GOLDHAMMER: Bob, do you happen to know about what proportion of our manufacturing employment is accounted for by lumber and logging?

MCCOY: I think Jim has some information on that.

MAXWELL: Lumber and wood products are now employing about 70,000 people in Oregon. This is just a little over one-half of all those employed in manufacturing. Now, of course, you must remember that these figures which I am quoting include logging as a manufacturing activity. This is not true of the general Census of Manufacturers.

BALLAINE: A most important factor in our economy is electric power. This is your province, Mr. Goldhammer. What sorts of manufacturing operations have been attracted by cheap power?

GOLDHAMMER: We should consider first the industries that came here largely as defense measures immediately preceding World War II and during the war. They were able to locate in the state of Oregon because of the availability of large amounts of low-cost power. One of the largest of these plants is the aluminum reduction mill at Troutdale that was established during the war. Immediately preceding World War II, a plant was established for the manufacture of chlorine, caustic soda, and chlorates, and now produces a number of other chemicals as well. A plant also started producing calcium carbide which was remanufactured into acetylene for the shipyards and a plant was built that manufactured ferroalloys. In the period since World War II there have been other developments. Probably the largest is the $30 million ferronickel smelter that has recently gone into full operation at Riddle, near Roseburg. This plant uses large amounts of electric energy to reduce ores containing about one and one-half per cent nickel into a ferronickel product used by the steel industry. This product contains about 25 per cent nickel. I am told that this is the only operation of its kind in the United States. There also is a pilot plant in the Springfield area which produced silumin, an aluminosilicon alloy. This plant uses a new process developed by the Bureau of Mines at Albany. There is also a zirconium operation of the Bureau of Mines at Albany, which was closed a couple of years ago but is now to be reopened. A second zirconium plant, largely established by local groups in Albany, expects to get started in the near future. I might also mention

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that during the war there was an electric steel rolling mill in the Portland area and a number of electric steel foundries. An additional aluminum plant will be built in the very near future at The Dalles. The company building this aluminum plant expects to produce alumina from bauxite, which will be the first operation of its kind in the Northwest.

BALLAINE: All those processes are dependent upon large amounts of relatively low-priced electricity, are they not?

GOLDHAMMER: That is correct.

MAXWELL: You mentioned the fact that these were dependent upon bauxite. Have you any information which would lead us to expect the production of alumina from our local clays?

GOLDHAMMER: The silumin plant at Springfield is using clays; however, at the present time they are using northern California clays rather than local clays, for the production of silumin. There is considerable experimentation at the present time on the use of local clays. One of the problems is the use, for example, of the iron as well as the alumina in our laterite ores. When, or if, it will be feasible to utilize local clays is hard to say.

BALLAINE: Is much of our industrialization other than the processes you have mentioned dependent upon electricity, Bernie?

GOLDHAMMER: Yes, most of our manufacturing has been using increasing amounts of electric energy. This has been due largely to mechanization and substitution of electricity for steam power. We at Bonneville made a study a few years ago which showed that the lumber industry between 1946 and 1951 increased its consumption of electricity per thousand board feet of raw material by about 50 per cent. It is the same in other industries. I think you will recall, Wes, that a few years ago you made a study of food industries and you found the same thing to be true—increasing use of electric energy per unit of product. I think we can expect those trends to continue as we go to more and more mechanization and automation.

MAXWELL: I think that the integration that is taking place now in the wood-products industry makes this factor increasingly important. In other words, you buy your fuel and use the tree for something more important.

GOLDHAMMER: That is right, and I might say that part of the increase in the use of electricity in the lumber industry has been due to increased utilization of wood. For example, a sawmill, which formerly burned its wood waste for generation of power, puts in a hardboard plant and finds that it not only has to buy power for the hardboard plant but also for the sawmill.

MAXWELL: I think that is a process which is going to become increasingly important in the state of Oregon. I think that the most important use of the tree will always have to be taken into consideration.

BALLAINE: During the last few years the state of Oregon has become actively interested in promoting additional industrialization through the Oregon Development Commission. Mr. McCoy, just how does the commission go about performing its assignments?

MCCOY: We have concentrated on three or four major functions. To date, we have put primary emphasis on research, because we feel that, in order to attract new industry to Oregon intelligently and to help existing industry grow, we must have the basic and specific facts regarding Oregon as an industrial location. Along this line, we have under way now a rather comprehensive and extensive research study being conducted for us by the Stanford Research Institute. We have just completed the first phase of this study, and it has brought to light many interesting and useful facts which we will use in the near future to promote and attract particular kinds of industries. This project, by the way, has been directed toward specific industrial opportunities. There is a considerable amount of general information about the economy of the state available from agencies such as Bonneville and others. We felt that, instead of doing another general study, we would like to get down to specific opportunities, so that we could use a rifle approach to this subject of industrial development rather than a shotgun approach.

GOLDHAMMER: Can you mention, Bob, some of the specific activities that you are going to cover on this rifle method?

MCCOY: We have come up with a list of industries that show a great potential. I would like to single out one particular type that emerged from this study in which you might be interested. We found, of course, not only through the work that we have done here, but through field study, that there is a tremendous interest in the pulp and paper industry in Oregon. One of the problems in discussing expansion in the pulp and paper industry is the fact that Oregon timber ownership is pretty well tied up and it is difficult for a firm that does not now own timber to acquire it on the market. We do know, however, that there is a large quantity of mill residue available in many parts of the state. So, we are taking selected areas where we know that there is a fairly large amount of sawmill residue and where we know that there is enough water to make a pulp mill feasible, and we are attempting to pin this residue down. In other words, we are trying to find out exactly what the quantity of residue is, what its condition is, and whether or not the sawmills in these particular areas would be willing to enter into long-term contracts with pulp and paper mills guaranteeing them a certain supply. We feel that in this way we might be able to bring into the economy of the state a number of pulp and paper firms that perhaps would otherwise not be interested because they could not buy large blocks of timber.

ROBERT: What do you mean by mill residue?

MCCOY: The waste product of the sawmilling process, chippable material, ends, slabs, etc. Some of the mill residue, however, is not suitable for chipping operations, and some is.

ROBERT: Presumably, these companies would be very glad to get rid of the residue?

MCCOY: Undoubtedly the mills themselves would be very happy to find a market for their residue, because now they are putting it in the burner.

GOLDHAMMER: Are they willing to sign long-term contracts?

McCOY: That is one of the problems; and, of course, it is one of the things that we are looking into. As the timber situation gets tighter and as there is a greater premium on the fullest kind of utilization, I believe that these mills will be willing to enter into long-term contracts, because higher utilization not only means that they can make money from a product that has been going in the burner, but it means that they are in a better position to bid competitively on government timber and at other timber sales.

GOLDHAMMER: This is out of the experimental stage, is it not, Bob? We have a plant in Oregon which is already dependent on waste for its entire raw material.

McCOY: There is a kraft mill in Albany which is a very interesting operation. But, in addition, we have four firms presently interested in this kind of situation. There is one local area in the state where we have already put together a group of sawmills that are willing to enter into this kind of long-range contract. In fact, they have even put up some investment capital.

GOLDHAMMER: Bob, you mentioned water. Are there many areas where pulp mills cannot locate because of insufficient water supplies?

McCOY: We want to approach this water problem from the point of view of getting the most constructive kind of utilization. We feel that it is not an "either or" situation when you get into the use of water for recreational versus industrial purposes. Certainly, we feel that the recreational values in Oregon should be maintained and protected. However, we feel that on many of our fine rivers we can have a manufacturing development which will not harm fishing and recreational interests. But we have approached this from the point of view of studying the sites carefully, the kind of pulp mill that would perhaps be suitable, the kind of process that would be used, and protection in terms of effluent control and treatment. There are not as many sites as one might assume, but there is a considerable number of them that would provide additional payrolls for the state and at the same time protect our recreational values.

BALLAINE: You mentioned research as only one of your functions.

McCOY: That is right. There are several others. One that we consider very important is assistance to communities that are seeking to establish local development programs. We have contacted and consulted with many of these communities. We usually urge them first of all to make a realistic and factual analysis of the economic situation in their particular area; then we are very happy to consult with them in regard to the formulation of a development program. We always suggest that these programs be pointed toward a relatively small number of feasible objectives instead of going off in all directions at once. We advise them to select one or two or three opportunities that seem outstanding and concentrate on them. We also help many communities by providing data which they may need when they make contacts themselves, or we refer to them contacts which we get at the state level. A third major function is the assistance that we give to outside industry. Many firms that are interested in locating in Oregon write us or come to see us, asking for information about various locational factors, raw materials, markets, power, transportation, etc. We are always very happy to cooperate with these firms and attempt to provide this information. I would like to mention just one other function that we have performed. We find that, because of the type of work we are doing, we are in a unique position to represent the state of Oregon on the national level in regard to projects of one kind or another that are important to the economy of the entire state. For example, our commission played a significant role in getting the appropriation to deepen the channel at the mouth of the Columbia River, a project which we feel is of great importance to the economy of Oregon.

BALLAINE: We might spend a few minutes appraising the future growth of manufacturing in Oregon. A few minutes ago, Jim spoke of the integration of the wood industry. Just what is happening to our wood-products industry?

MAXWELL: The wood-products industry is undergoing a considerable transformation at the present time. We are increasing our utilization of wood through the use of chemical and other mechanical means. For example, we are using the tree to provide the base for wood products such as wallboard, hardboards, insulation boards, and it is also becoming increasingly important as a source of chemicals.

McCOY: One of the great chemical potentialities in the use of the tree is probably in the cellulose industry. There is presently no cellulose production on the West Coast; yet, with the availability of three major ingredients—water, timber, and natural gas—I think that there are very great potentialities for development in Oregon, perhaps a cellophane plant, to be more specific. Commercial wax is another chemical byproduct, produced from Douglas-fir bark. The process was developed by the Oregon Forest Products Laboratory at Corvallis, and there are a number of firms interested. There is also a pharmaceutical product called hydroporcetin, also produced from bark, which is of considerable value as well. We may find that this part of the tree, which in the past has been considered to have no economic value, will provide the basis for a very important industry in our state.

GOLDHAMMER: I think the chemical industry is one that should be looked at very closely in the wood industries because of the high value of the product relative to the amount of raw materials used. With the chemical industry expanding rapidly and looking for cheap sources of chemicals and also for new chemicals, I think there is considerable potential in this field from wood waste.

MAXWELL: I think some of our firms that are integrating their operations are taking steps to develop the chemicals from wood waste. Research has brought forth a number of soil conditioners, and Crown Zellerbach is now producing a dimethyl sulfide, which has important uses as an industrial solvent.

ROBERT: There really is not much in connection with lumber that could be said to be a waste product any more, is there? What do they throw away?

McCOY: Certainly less and less. I like to think that we will reach the day when there will not be any waste product. Of course, the degree of utilization varies considerably throughout the industry. In some firms you get a rather considerable amount of waste, because they do not have the facilities to utilize to the maximum extent the logs which they are cutting.

MAXWELL: Is it not true, Bob, that integration is often considered a factor of size? Just the cost of installing the machines and equipment to utilize this waste is often prohibitive for many small manufacturers.

McCOY: It is true, I think, that integration is a factor of financial ability, although I would not say that efficiency is a factor of financial ability. Some of the most efficient mills that I have ever seen in operation are relatively small mills. Also, there may be a trend in the forest-products economy of Oregon toward cooperative utilization and integration by groups of smaller mills. With the log situation what it is, with the market becoming more competitive, I think that the only way a number of small mills are going to stay in the industry is to get together, perhaps to finance barking and chipping operations cooperatively, so that they can get a higher utilization in that manner. I have already mentioned the kind of utilization we are attempting to get through these pulp-mill arrangements.

GOLDHAMMER: Bob, are there not really two problems here? One is the utilization of the waste from the mill—that is, the leavings from sawmill or plywood operations—and, second, the utilization of species that are now left in the forest, such as lodgepole pine.

McCOY: That is certainly true. The Johns-Manville Co. has recently announced that they are going to establish a $15 million plant in southern Oregon to produce insulation board from lodgepole pine. As you know, heretofore lodgepole pine has been considered a sort of a weed, something that had to be got out of the way. But now we are finding that this species is becoming the base for a very important industrial addition to our states, and there are other firms that are also interested in lodgepole pine. We also find that there is an increasing interest by the pulp and paper industry in alder and that more lumber mills are looking at the potentialities of the subalpine species.

BALLAINE: Bernie, you mentioned something about reduction of ores such as zirconium and other metallurgical processes. Do you think there is much future in that?

GOLDHAMMER: I think there is some future. The size of the employment that we will get from it is hard to estimate; but, in addition to the reduction of the alumina clays in the production of silumin that I mentioned, there is a possibility of using other low-grade ores, like rhodinite and chrome, in the production of ferroalloys. Also I do not think that we should overlook the possibilities of a titanium industry in this region. We do have some raw-materials possibilities in ilmenite for a titanium industry. One of the big problems is technological progress to reduce the cost of producing titanium.

McCOY: In fact, Bernie, just recently—just within the last couple of months—a firm has been established in Albany which does not produce titanium, but which uses titanium for the production of a finished product.

BALLAINE: Another extremely important factor is the growth of population on the West Coast, especially in California, which should make a number of industries profitable in Oregon that are not now feasible.

MAXWELL: I think that is true. The growth of population in California makes it attractive for industries that are market-oriented to locate near there. However, many of these industries that might prefer to locate in California find certain disadvantages there which are offset by advantages in Oregon.

BALLAINE: For instance?

MAXWELL: I am thinking of some types of chemical industries where the shortage of water in California makes it necessary to move out of the California market area.

GOLDHAMMER: The cellophane plants that Bob mentioned a while ago have looked to Oregon and not to California because of the large supplies of water available here.

BALLAINE: Another type of industry that has been important in the past is food processing. What is the future for food processing?

MAXWELL: I will speak for what little I know about it, Wes. The frozen-food industry is now processing about 50 per cent of our production of processed foods. Canning is still important, but it is declining in importance as frozen foods become more acceptable to the housewife.

BALLAINE: Is not the matter of freight rates rather important here? Has that not limited the extent of the market of Oregon processed foods?

GOLDHAMMER: That is quite right. The Oregon manufacturers of various types of canned and frozen foods have found that the geographical size of their market has been diminishing because of the increase in freight rates. However, at the same time there has been such a large growth of population in the western states that population-wise they probably have had an increase in market.

McCOY: This might work two ways. It might mean that the markets for food presently processed in Oregon will be restricted somewhat, but it might also make it feasible to establish in the area new types of food processing which are now being served from outside Oregon.

BALLAINE: Is is not true that the same thing applies to other types of local service industries?

McCOY: It certainly is. In fact, we feel that one of the great influences on the growth of the pulp and paper industry, for example, will be the attraction to Oregon of firms that serve the pulp and paper industry—on the one hand, firms that make machinery and supplies for the pulp and paper industry, and, on the other hand, firms that use the products of the pulp and paper industry as a raw material.

BALLAINE: Gentlemen, we still have a number of points to discuss, but our time has run out. Thank you.

Aluminum Capacity Short of Demand in World Market

The huge increase in aluminum capacity concentrated in the Pacific Northwest during World War II aroused fears that aluminum would go begging for a market with the end of hostilities. Although production dropped sharply when the war ended, it soon became evident that the war-built facilities were inadequate to satisfy the ever-growing civilian and military needs.

Tightness has persisted in the United States aluminum market, particularly during the last four years, notwithstanding four consecutive years of record-breaking production. Facilities in the Pacific Northwest as elsewhere have been strained to capacity. In spite of this supply-demand imbalance, primary aluminum prices have not risen as sharply as prices of some other metals. The premium prices commanded by aluminum scrap and the common

complaints of shortage by fabricators indicate that primary aluminum prices could have risen higher.

Imports have been relied on to supplement domestic supplies; but, with rapidly increasing world demand, foreign sources are becoming less dependable. Compensation for a sharp drop in imports in 1955 was provided partly by a release of aluminum from the government stockpile; and none of the current production went into stockpiles during the first half of 1956. Some relief can be expected in 1956 because of increased production, although demand will still be running at high levels.

The United States and world production records established in 1955 will undoubtedly be broken again in 1956. Since the high world demand for aluminum is likely to continue throughout 1956, any significant increase in United States supplies will be based on domestic production.

Primary production in the United States for 1956 is expected to exceed 1,600,000 tons, setting a new production record for the fifth consecutive year. Production in the first quarter of 1956 is already running 11 per cent higher than in the first quarter of 1955. This increased production rate is made possible largely by the new 60,000-ton annual cacapity plant completed in August 1955 in Montana and the addition of new potlines in established plants. The capacity of United States plants will be increased another 9 per cent in 1956.

World production would have been still higher in 1955 except for unfavorable hydroelectric power conditions in Canada and Scotland. Canada had expected an 89,000-ton increase in production in 1955, but drought conditions in Quebec and the severance of the transmission line to the reduction plant by a snowslide at Kitimat, British Columbia cut Canada's anticipated increase in half. The Aluminum Co. of Canada was not able to resume full production until May 1956.

This drop in anticipated production prevented the United States from importing as much aluminum as the domestic demand warranted. Throughout 1955, the United States market could have easily absorbed much more foreign aluminum than was made available to supplement domestic supplies. In fact, net primary imports dropped from 216,000 tons in 1954 to 197,000 tons in 1955. Strong foreign demand, along with output falling short of anticipations, prevented a greater flow to the United States, in contrast to 1954 when imports declined because of an abundance of domestic production.

The importance of foreign demand on United States imports is reflected in the breakdown of shipments made by Canada, the principal world exporter. Total export shipments of primary aluminum from Canada rose from 475,200 tons in 1954 to 520,800 tons in 1955. About 92 per cent of that increase went to Great Britain, which has a contractual first call on a large block of the Canadian production. The United States managed to receive only 1½ per cent of the Canadian increase in exports. Canadian producers must also hurdle a 1½ cent per pound tariff barrier on primary aluminum imports into the United States.

On balance, it appears that aluminum supplies for 1956 will depend mostly on domestic production as was the case in 1955. The supply-demand relationship, therefore, will depend more on what happens to demand in 1956.

One of the surprising developments in the aluminum field has been the rapid shift to civilian uses. High demand today is based primarily on continued growth of regular peacetime markets, not by any heavy military or defense consumption of aluminum. Although it was the Korean War mobilization requirements which triggered the doubling of primary capacity since 1950, current defense uses account for approximately 10 per cent of total consumption in contrast to 30 per cent during 1952 at the peak of the Korean emergency.

Rapid diversification, more staple uses, and continued new technological developments increasing the area of substitution stand out in the consumption pattern evolving for aluminum. In recent years aluminum has been competing in a wide range of fields from heavy forging and structural components to foil for wrapping cigarettes. Its workability, ductility, lightness, corrosion resistance, and strength make it one of the most versatile metals. Building uses of aluminum have been leading the field every year since 1946, closely followed by transportation, durable goods, electrical components, industrial and commercial uses, and finally packaging and containers.

Since 1950, aluminum consumed in building and construction applications has doubled. Aluminum windows and combination storm and screen windows have fostered markets for aluminum, along with the already rapidly developing use of aluminum for roofing and siding.—*Monthly Review*, Federal Reserve Bank of San Francisco, June 1956.

CURRENT BUSINESS TRENDS IN OREGON

Business Failures. Dun and Bradstreet's series showing commercial failures is frequently considered an indicator of business health. Figures for Oregon are given below:

	1955		1956	
	Number	*Liabilities*	*Number*	*Liabilities*
Jan.	8	$ 160,000	13	$ 421,000
Feb.	2	76,000	7	1,234,000
Mar.	8	157,000	13	1,257,000
Apr.	13	259,000	13	604,000
May	14	368,000	21	365,000
June	11	310,000	30	593,000
July	6	236,000	...	...
Aug.	9	257,000	...	...
Sept.	7	1,009,000	...	...
Oct.	13	319,000	...	...
Nov.	14	559,000	...	...
Dec.	15	436,000	...	...

Index of Man Hours in Manufacturing. One of the best indicators showing changes in manufacturing activity is the man hours of industrial production workers. These figures apply only to personnel engaged in direct manufacturing activities; sales, office, and general administrative employees are excluded. The index is derived by the Bureau of Business Research from data supplied by the Oregon Unemployment Compensation Commission. The most recent reading covers the month of May 1956. (No adjustment for seasonal variation has been made. 1951=100.)

	1955	1956		1955	1956
Jan.	84.9	84.1	July	102.8	...
Feb.	85.0	84.2	Aug.	111.0	...
Mar.	84.4	84.1	Sept.	104.1	...
Apr.	85.3	93.4	Oct.	99.6	...
May	92.7	96.6	Nov.	91.3	...
June	102.1	...	Dec.	88.0	...

Life-Insurance Sales. During May 1956 sales of ordinary life insurance in Oregon (excluding industrial life insurance, group and wholesale sales under new contract, renewals, dividend additions, etc.) were 19.6 per cent ($4,818,000) higher than in April 1956 and 21 per cent higher than in May 1955. The national figures showed a 3.9 per cent increase in comparison with April 1956 and a 15 per cent increase in comparison with May 1955.

CURRENT BUSINESS TRENDS IN OREGON

Lumber. June 1956 production of lumber in the Douglas-fir area of the Pacific Northwest continued to decline mildly. The drop in new orders was more substantial. The figures below were supplied by the West Coast Lumbermen's Association and are in thousands of feet board measure:

	June 1956	*May 1956*	*June 1955*
Average weekly production	180,986	181,605	188,568
Average weekly orders	164,128	171,631	199,844
Unfilled orders, end of month	623,696	708,201	831,915
Lumber inventory, end of month	953,961	967,661	886,458

Department-Store Sales. The only retail sales indicator for Oregon is the sales of department stores in Portland, a series which is computed by the Federal Reserve Bank of San Francisco. The percentage of dollar sales volume for the period ending July 7, 1956, as compared with the same period a year ago, for Portland and other Pacific Coast cities are shown below:

	Week Ending July 7	*Four Weeks Ending July 7*	*Calendar Year to July 7*
Portland	+3	0	0
Los Angeles	+6	+3	−1
San Francisco Bay	+5	+4	+2
Seattle	+2	+2	+4
United States	+3	+7	+4

Employment. The number of nonagricultural workers employed in Oregon increased 4.0 per cent (19,000) between mid-May and mid-June 1956. The largest gain was in the field of foods and kindred products (8,900), with considerable increases in lumber and wood products (3,700) and in contract construction (2,000). There were no substantial declines. Employment in mid-June 1956 was 4.5 higher than in mid-June 1955. More detailed figures from the Oregon Unemployment Compensation Commission follow:

	June 1956	*May 1956*	*June 1955*
Lumber & wood products	86,600	82,900	90,000
Food & kindred products	24,200	15,300	18,300
Other manufacturing	48,000	47,900	43,900
Total manufacturing	158,800	146,100	152,200
Contract construction	26,800	24,800	23,800
Retail trade	81,600	81,200	80,200
Government	74,600	74,800	72,100
Other nonmanufacturing	157,200	153,100	149,100
Total nonmanufacturing	340,200	333,900	325,500
Total nonagricultural employment	499,000	480,000	477,700

Multnomah County Real-Estate Transactions. During June 1956 there were 1,032 real-estate sales amounting to $11,294,147 in Multnomah County. Of these, 742 involved residences, the sales price of which was $7,798,591; 221 were vacant properties, $908,906; and 69 were business properties, $2,586,650. Additional figures are:

	June 1956	*May 1956*	*June 1955*
Number of sales	1,032	1,038	1,171
Value of sales	$11,291,147	$10,925,173	$10,791,169
Number of mortgages	1,055	1,065	1,257
Amount loaned	$10,004,450	$11,064,243	$11,944,653
Number of sheriff's deeds	4	6	2
Amount of sheriff's deeds	$21,060	$24,540	$5,481
Average residential selling price	$10,510	$10,512	$9,542

BANK DEBITS

Bank debits represent the dollar value of checks drawn against the deposit accounts of individuals and business firms. Bank debits are regarded as good indicators of current business activity, although their value for this purpose may be impaired by the inclusion of large checks arising out of transfers of funds for the purchase of certain types of capital assets that do not constitute "business activity." The Bureau of Business Research collects bank debits from 152 banks and branches monthly.

Marketing Districts	*Number of Banks Reporting*	*Debits June 1956*	*Debits May 1956*	*Debits June 1955*	*June 1956 Compared with*	
					May 1956	*June 1955*
Oregon	145	$1,475,934,047	$1,573,159,876	$1,489,080,460	− 6.2	− 1.5
Portland (Portland, Hillsboro, Oregon City, etc.)	41	871,312,604	984,788,517	936,521,703	−11.5	− 7.0
Lower Willamette Valley (Salem, McMinnville, etc.)	23	135,390,084	129,619,251	113,661,930	+ 4.5	+19.1
Upper Willamette Valley (Albany, Corvallis, Eugene, etc.)	21	157,049,178	148,588,020	152,313,267	+ 5.7	+ 3.1
North Oregon Coast (Astoria, Tillamook, etc.)	7	27,698,701	25,124,705	29,156,829	+10.2	− 5.0
Douglas, Coos, Curry counties	11	62,591,600	57,073,344	54,411,341	+ 9.7	+15.0
Southern Oregon (Ashland, Medford, Grants Pass)	7	66,261,591	76,599,180	57,760,588	−13.5	+14.7
Upper Columbia River (The Dalles, Hood River, etc.)	9	27,520,026	26,188,601	28,679,389	+ 5.1	− 4.0
Pendleton area	8	28,631,312	26,195,016	25,521,297	+ 8.1	+12.2
Central Oregon (Bend, Prineville, Redmond, etc.)	5	27,145,518	25,189,461	26,184,817	+ 7.8	+ 3.7
Klamath Falls, Lakeview area	5	31,282,753	32,804,402	29,181,516	+ 4.5	+17.5
Baker, La Grande area	6	20,311,339	24,040,781	18,784,597	−15.4	+ 8.3
Burns, Ontario, Nyssa	5	18,003,311	16,618,598	16,900,183	+ 8.1	+ 6.5

BUILDING PERMITS

Building permits give an indication of building operations planned rather than actual construction under way. Care must be taken in interpreting these data to allow for the lag which may elapse between the issuance of the permit and the beginning of actual construction. The data have been collected by the Bureau of Business Research.

	New Residential June 1956	*New Nonresidential June 1956*	*Additions, Alterations & Repairs June 1956*	*Totals June 1956*	*Totals May 1956*	*Totals June 1955*
Albany	$ 91,000	$ 23,000	$ 34,200	$ 148,200	$ 431,900	$ 116,100
Baker	57,290	...	2,520	59,810	22,520	282,587
Bend	48,250	200	33,430	81,880	56,270	1,220,152
Coos Bay	23,200	44,050	11,625	78,875	106,500	36,800
Corvallis	434,000	676,675	207,345	1,320,020	3,985,975	252,725
Eugene	115,820	108,500	204,207	428,527	777,770	537,959
Grants Pass	95,235	76,900	40,440	212,575	286,715	225,260
Hillsboro	53,200	20,000	16,795	89,995	47,200	132,675
Klamath Falls	105,700	244,780	35,790	386,270	585,705	171,620
McMinnville	72,500	3,375	17,390	93,265	16,100	27,600
Medford	162,000	382,077	36,338	580,415	560,867	793,413
North Bend	40,413	2,000	7,156	49,569	70,127	98,501
Pendleton	69,500	...	6,855	76,355	318,190	238,811
Portland	1,117,800	1,072,680	2,276,965	4,467,445	4,173,515	3,966,735
Roseburg	89,988	...	4,100	94,388	431,500	149,850
Salem	335,200	108,775	119,203	563,178	501,394	413,588
Springfield	25,600	...	73,353	98,953	52,225	489,175
The Dalles	67,090	...	24,012	91,102	152,864	91,874
Lane County	571,600	506,305	44,255	1,122,160	1,045,895	881,475
Multnomah County	2,016,858	530,000	132,110	2,678,968	3,791,670	3,632,865
Wasco county	30,000	5,300	5,281	40,581	64,090	51,000
38 other communities	666,361	3,272,171	293,521	4,232,053	2,962,125	1,528,953
Totals	$6,288,605	$7,078,788	$3,627,191	$16,994,587	$20,441,027	$15,543,336